

IN THE CLAIMS

Please add new claims 45-53.

Pending claims 1-14, 23-36 and 45-53 follow.

1. (Original) A method for inspecting a mask, comprising:
generating integrated circuit design data; and
using information for interfeature relationships of the integrated circuit design data to inspect the mask.
2. (Original) The method of claim 1, wherein the interfeature relationships are on one layer of the integrated circuit design.
3. (Original) The method of claim 1, wherein the interfeature relationships are across multiple layers of the integrated circuit design.
4. (Original) The method of claim 1, wherein the interfeature relationships comprise:
interfeature process proximity effects;
interfeature coupling across layers;
interfeature electronic relationships; or
wire interconnects longer than a given length.
5. (Original) The method of claim 1, wherein the information for interfeature relationships includes information for identifying a redundancy of features, and using the information for interfeature relationships to inspect the mask further comprises:
determining that at least one feature is functional; and
waiving one or more defects on features redundant to the functional feature.

6. (Original) A method for performing metrology operations, including inspection, on a lithography photomask or wafer, comprising:
 - generating integrated circuit design data; and
 - using context information from the integrated circuit design data to inspect the photomask or wafer.
7. (Original) The method of claim 6, wherein using context information comprises:
 - identifying to individual mask features or groups of mask features information relating to circuit elements intended to be produced from those mask features as defined in the integrated circuit design data.
8. (Original) The method of claim 6, wherein using context information comprises:
 - analyzing mask features for contextual priority.
9. (Original) The method of claim 8, wherein using context information comprises:
 - assigning priorities to all mask features or groups of mask features.
10. (Original) The method of claim 9, wherein assigning priorities to mask features comprises:
 - applying criteria to mask design data by manual process.
11. (Original) The method of claim 9, wherein assigning priorities to mask features comprises:
 - applying criteria to mask design data by computer-aided automated process.
12. (Original) The method of claim 6, wherein using context information comprises:
 - analyzing integrated circuit design data for grouping in mask inspection areas.

13. (Original) The method of claim 6, wherein using context information comprises passing context information to a mask inspection system.
14. (Original) The method of claim 6, wherein the context information comprises information for neighboring geometries, electrical intent of the features, timing of the intended circuit, redundant features, and relationships of a given feature to neighboring features.
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled).
21. (Canceled).
22. (Canceled)
23. (Original) A system for inspecting a mask, comprising:
means for generating integrated circuit design data; and
means for using information for interfeature relationships of the integrated circuit design data to inspect the mask.
24. (Original) The system of claim 23, wherein the interfeature relationships are on one layer of the integrated circuit design.

25. (Original) The system of claim 23, wherein the interfeature relationships are across multiple layers of the integrated circuit design.
26. (Original) The system of claim 23, wherein the interfeature relationships comprise:
interfeature process proximity effects;
interfeature coupling across layers;
interfeature electronic relationships; or
wire interconnects longer than a given length.
27. (Original) The system of claim 23, wherein the information for interfeature relationships includes information for identifying a redundancy of features, and said means for using the information for interfeature relationships to inspect the mask further comprises:
means for determining that at least one feature is functional; and
means for waiving one or more defects on features redundant to the functional feature.
28. (Original) A system for performing metrology operations, including inspection, on a lithography photomask or wafer, comprising:
means for generating integrated circuit design data; and
means for using context information from the integrated circuit design data to inspect the photomask or wafer.
29. (Original) The system of claim 28, wherein said means for using context information comprises:
means for identifying to individual mask features or groups of mask features information relating to circuit elements intended to be produced from those mask features as defined in the integrated circuit design data.

30. (Original) The system of claim 28, wherein said means for using context information comprises:

means for analyzing mask features for contextual priority.

31. (Original) The system of claim 30, wherein said means for using context information comprises:

means for assigning priorities to all mask features or groups of mask features.

32. (Original) The system of claim 31, wherein assigning priorities to mask features comprises:

applying criteria to mask design data by manual process.

33. (Original) The system of claim 32, wherein said means for assigning priorities to mask features comprises:

means for applying criteria to mask design data by computer-aided automated process.

34. (Original) The system of claim 28, wherein said means for using context information comprises:

means for analyzing integrated circuit design data for grouping in mask inspection areas.

35. (Original) The system of claim 28, wherein said means for using context information comprises passing context information to a mask inspection system.

36. (Original) The system of claim 28, wherein the context information comprises information for neighboring geometries, electrical intent of the features, timing of the intended circuit, redundant features, and relationships of a given feature to neighboring features.

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

41. (Canceled).

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (New) The method of claim 1, wherein using information for interfeature relationships comprises using information for interfeature relationships to inspect the mask by inspecting elements of the mask in an order based on the interfeature relationships.

46. (New) The method of claim 6, wherein using context information from the integrated circuit design data to inspect the photomask or wafer comprises inspecting elements of the photomask or wafer in an order based on the context information.

47. (New) The system of claim 23, wherein the means for using information for interfeature relationships of the integrated circuit design data determines an order of elements of the mask to be inspected based on the interfeature relationships.

48. (New) The method of claim 1, wherein using information for interfeature relationships comprises using information for interfeature relationships to inspect the mask by adjusting the power of an inspection beam according to the interfeature relationships.

49. (New) The method of claim 6, wherein using context information from the integrated circuit design data to inspect the photomask or wafer comprises adjusting the power of an inspection beam according to the context information.
50. (New) The system of claim 23, wherein the means for using information for interfeature relationships of the integrated circuit design data to inspect the mask adjusts the power of an inspection beam according to the interfeature relationships.
51. (New) The method of claim 1, wherein portions of the mask are assigned different priorities according to the interfeature relationships.
52. (New) The method of claim 6, wherein portions of the photomask or wafer are assigned different priorities according to the context information.
53. (New) The system of claim 23, wherein portions of the mask are assigned different priorities according to the interfeature relationships.